

**DROUGHT.**

In Kans., Nebr., S. Dak., Iowa, north Tex., Ind. T., Ky., Ill., and south Mich. the drought was broken by rain during the early part of the month, and in Ohio the rains of the middle of the month ended the dry spell in that region. In S. Dak. late crops were reported injured. In southwest Minn. the drought was very severe and streams were reported very low. In Ohio great injury was caused to corn, potatoes, and fruit. In

southern Mich. potatoes, fruit, and berries were affected. In east and central Va. the month was unusually dry, and corn and vegetation were damaged.

**PRAIRIE FIRES.**

Prairie fires caused considerable damage in parts of Mont. and S. Dak., in Ford and Edwards counties, Kans., and in McCulloch Co., Tex.

**VERIFICATIONS.****FORECASTS FOR 24 HOURS IN ADVANCE.**

[Verifications made by Assistant Professor C. F. Marvin, assisted by Mr. H. E. Williams, chief clerk of the Forecast Division.]

The forecasts for districts east of the Rocky Mountains for August, 1890, were made by Captain H. H. C. Dunwoody, 4th Artillery, Signal Officer, and those for the Pacific coast districts were made at San Francisco, Cal., by 2d Lieutenant John P. Finley, Signal Corps.

*Percentages of forecasts verified, August, 1890.*

States.		States.	
Maine.....	80.1	Kentucky.....	83.6
New Hampshire.....	82.7	Ohio.....	86.5
Vermont.....	82.8	West Virginia.....	78.4
Massachusetts.....	83.8	Indiana.....	84.9
Rhode Island.....	84.4	Illinois.....	88.3
Connecticut.....	75.9	Lower Michigan.....	86.1
Eastern New York.....	80.1	Upper Michigan.....	79.0
Western New York.....	84.5	Wisconsin.....	84.4
Eastern Pennsylvania.....	85.9	Minnesota.....	82.1
Western Pennsylvania.....	83.7	Iowa.....	80.1
New Jersey.....	83.3	Kansas.....	84.0
Delaware.....	83.7	Nebraska.....	82.4
Maryland.....	82.1	Missouri.....	85.8
District of Columbia.....	81.7	Colorado.....	85.1
Virginia.....	84.9	North Dakota.....	83.9
North Carolina.....	84.6	South Dakota.....	77.0
South Carolina.....	82.2	Southern California*.....	89.8
Georgia.....	87.2	Northern California*.....	90.2
Eastern Florida.....	93.6	Oregon*.....	85.7
Western Florida.....	85.0	Washington*.....	87.3
Alabama.....	86.6	By elements: Weather.....	86.0
Mississippi.....	87.7	Temperature.....	81.5
Louisiana.....	88.9	Monthly percentage of weather and temperature combined.....	84.2
Texas.....	90.6		
Arkansas.....	87.4		
Tennessee.....	86.8		

\*In determining the monthly percentage of weather and temperature combined, the Pacific coast states are not included. †The forecasts of temperature in districts east of the Rocky Mountains for August, 1890, were made with reference to the maximum temperature alone; that is, a prediction of warmer or cooler indicated that the maximum temperature of the day designated would be higher or lower than the maximum of the previous day. ‡The monthly percentage of weather and temperature combined is determined by multiplying the percentage of weather by 6, and the percentage of temperature by 4, and dividing their sum by 10.

**FORECASTS FOR 48 HOURS IN ADVANCE.**

Appreciating the great importance that long time predictions possess for the general public the Chief Signal Officer has authorized forecasts for 48 and 72 hours, covering the 2d and 3d days in advance. These are optional with the forecast official, and are only made when clearly in the public interest, and cover, in all cases, considerable areas of country, and are not confined to localities.

Percentages of verifications of forecasts made for second day in advance. Number of predictions made: weather, 18; temperature, 26. Percentages of verifications: weather, 58.1; temperature, 65.4; weather and temperature combined, 61.8. No forecasts for 72 hours were made during the month.

**CAUTIONARY SIGNALS FOR AUGUST, 1890.**

Statement showing percentages of justifications of wind signals for the month of August, 1890:

*Wind signals.*—(Ordered by Captain H. H. C. Dunwoody.) Total number of signals ordered, 51, of which 32 were justified as to velocity, and all as to direction. Of the signals ordered, 50 were cautionary signals, of which 31 were justified, and one was a storm signal which was justified. 11 signals were ordered for easterly winds, and 40 for westerly winds, all of which were justified. Percentage of justifications, 62.5. No cold-wave signals were ordered during the month.

*Percentages of verifications of weather and temperature signals reported by directors of the various State Weather Services for August, 1890.*

States.	Weather.	Temperature.	States.	Weather.	Temperature.
Illinois.....	85.6	87.3	Nebraska.....	80.6	89.0
Iowa.....	81.6	93.2	New Jersey.....	75.9	85.8
Louisiana, northern.....	88.0	96.0	North and South Dakota.....	92.0	92.0
Louisiana, southern.....	79.0	92.0	Ohio.....	84.0	88.0
Minnesota.....	69.0	73.0	Pennsylvania.....	82.0	85.0
Missouri.....	85.0	87.0	South Carolina.....	94.5	79.1

**STATE WEATHER SERVICES.**

[Temperature in degrees Fahrenheit; precipitation, including melted snow, in inches and hundredths.]

The following extracts and summaries are republished from reports for August, 1890, of the directors of the various state weather services:

**ALABAMA.**

The weather was unfavorable to the cotton crop, as it favored the development of rust, which caused considerable damage.

*Temperature.*—Highest monthly mean, 80, at Livingston; lowest monthly mean, 72.1, at Chepultepec; maximum, 97, at Eufaula, 7th, and at Marion, 27th; minimum, 50, at Florence, 28d, and at Double Springs, 31st.

*Precipitation.*—Greatest monthly, 7.80, at Florence; least monthly, 0.07, at Pine Apple.

*Wind.*—Prevailing direction, southwest.—Prof. P. H. Mell, Auburn, director; J. M. Quarles, Private, Signal Corps, assistant.

**ARKANSAS.**

*Temperature.*—The mean was about 2.0 above the normal; maximum, 104, at Lead Hill, 8th; minimum, 50, at Forrest City, 18th; greatest local monthly range, 46, at Lead Hill; least local monthly range, 19, at Winslow.

*Precipitation.*—The average was about 0.86 above the normal; greatest monthly, 10.52, at Winslow; least monthly, 0.15, at Malvern.—M. F. Locke, Commissioner of Agriculture, Little Rock, director; W. U. Simons, Sergeant, Signal Corps, assistant.

**COLORADO.**

*Temperature.*—The mean was 4.0 above the average for the last 4 years; highest monthly mean, 76.7, at Lamar; lowest monthly mean, 48.9, at Climax; maximum, 104, at Bennet, 6th, and at First View, 7th; minimum, 24, at Alma, 25th; greatest local monthly range, 66, at Julesburg; least local monthly range, 30, at Cumbres.

*Precipitation.*—The rainfall was 0.10 above the average for the last 4 years; the amount ranged from 5.41, at Watervale, to trace, at Westcliffe.

*Wind.*—Prevailing direction, west.—Prof. F. H. Loud, Colorado Springs, director; W. S. Miller, Sergeant, Signal Corps, assistant.

**ILLINOIS.**

*Temperature.*—The mean was 2.8 below the normal of the past 15 years; maximum, 104, at Atwood, East Peoria, and Pontiac, 3d; minimum, 40, at Aurora, 23d.

*Precipitation.*—The average was 0.86 below the normal of the last 12 years; greatest monthly, 7.06, at Jordan's Grove; least monthly, 0.95, at Collinsville.